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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/691,675

Applicant(s)

DURAN ET AL.

Examiner

David N. Werner

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 36-75 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 36-75 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

Application/Control Number:  
10/691,675  
Art Unit: 2621

### **DETAILED ACTION**

1. This Office action for US Patent Application 10/691,675 is in response to communications filed 10 October 2007, in reply to the non-final rejection of 10 July 2007. Currently, claims 36-75 are pending.

2. In the prior Office action, claims 36 and 37 were rejected under 35 U.S.C. 101 for statutory-type double patenting with US Patent 6,285,746 B1, claim 75 was rejected for non-statutory obviousness-type double patenting with US Patent 6,285,746 B1, claims 36-43, 45-47, and 49-75 were rejected under 35 U.S.C. 103(a) as obvious over US Patent 4,682,248 (Schwartz) in view of US Patent 4,972,396 (Rafner). Claims 44 and 48 were rejected under 35 U.S.C. 103(a) as obvious over Schwartz in view of Rafner, and in view of "New Video Coding Standard for the 1990s" (Carr). Figure 1 was objected to as not having a "prior art" label, and the disclosure was objected to for not having the abstract on a separate sheet.

### ***Response to Amendment***

3. Applicant's amendment to the specification has been fully considered. The objection to the amendment as not being on a separate sheet of paper has been withdrawn.

Application/Control Number:  
10/691,675  
Art Unit: 2621

***Response to Arguments***

4. Applicant's arguments filed 15 October 2007 have been fully considered but they are not persuasive.

5. Applicant traversed the objection to figure 1, citing that page 7 of the specification describes "a teleconferencing system according to the preferred embodiment of the invention". However, page 5 of the specification refers to figure 1 as "a conventional two-way teleconferencing system". Therefore, the examiner respectfully maintains the objection to figure 1. Applicant is required to remove the reference to figure 1 as teaching a "conventional" system to prevent the necessity of a "prior art" label for figure 1.

6. Applicant traversed the statutory-type double-patenting rejection of claims 36 and 37 with claims 1 and 3 of US Patent 6,285,746. It appears that Applicant believes the "central processing unit" of claim 36 of the present invention to be distinct from the "program memory coupled to said communication processing unit" of the patented invention, the "controls" of the present invention to be distinct from the "command" of the patented invention, and that the present invention does not cite "at least one" mass storage device. The examiner respectfully submits that this argument is unpersuasive.

Regarding the alleged difference between a "central processing unit" and a "program memory coupled to a communication processing unit", it is noted that *The*

Application/Control Number:  
10/691,675  
Art Unit: 2621

*Authoritative Dictionary of IEEE Standards Terms* defines a central processing unit as follows:

- (1) The unit of a computing system that includes the circuits controlling the interpretation of instructions and their execution.
- (2) Describes that part of a computer that does the primary computational functions. Loosely describes the computer system other than connected input and output devices.
- (3) That unit of a computer system that fetches, decodes and executes programmed instructions and maintains the status as the program is executed.

"Computer", in turn, is defined as:

- (3) A device that consists of one or more associated processing units and peripheral units, that is controlled by internally stored programs, and that can perform substantial computations, including numerous arithmetic operations, without human intervention during a run.

Finally, "memory" is defined as:

All of the addressable storage in a processing unit and other internal storage that is used to execute instructions.

Therefore, since a "central processing unit" is necessarily part of a computer, and any operable computer must include a memory to store executable instructions or programs, it is inherent that the "central processing unit" of claim 36 of the present invention is coupled to a "program memory", as described in claim 1 of the patented invention.

Regarding the alleged difference between the "at least one" mass storage device in the patented invention and the "mass storage device" in the present invention, claim 36 of the present invention recites, in the eighth line of the claim, "...at least one mass storage device".

Application/Control Number:  
10/691,675  
Art Unit: 2621

Regarding the alleged difference between a "control" in the present invention and a "command" in the patented invention, it is noted that *The Authoritative Dictionary of IEEE Standards Terms* defines a command as follows:

- (9)(A) In hardware, a control signal.
- (B) An expression that can be input to a computer system to initiate aan [sic] action or affect the execution of a computer program; for example, the (log on) command to initiate a computer session.
- (C) Loosely, a mathematical or logic operator.
- (D) Loosely, a computer instruction.

Since both the present invention and a patent invention refer to a command or control as coming from a processor, it is believed that this is the sense of the word "command" in the patented invention.

As applicant has failed to show any difference between claims 1 and 3 of US Patent 6,285,746 and claims 36 and 37 of the present invention, aside from minor, mere semantic differences between equivalent structures, the statutory-type double patent rejection of claims 36 and 37 is respectfully maintained. Applicant is reminded that in showing anticipation, an *ipsimms verbis* test is not required. See *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

7. Applicant traverses the non-statutory type double-patenting rejection of claim 75 of the present invention, and claim 36 of US Patent 6,285,746, alleging that it has not been shown that the claim in the present application does not "define an invention that is merely an obvious variation of an invention claimed in the patent", and requests a

Application/Control Number:  
10/691,675  
Art Unit: 2621

formal analysis under *Graham v. John Deere*, particularly the first and second factors of “determining the scope and contents of the prior art” and “ascertaining, the differences between the prior art and the claims at issue”. It is respectfully noted that MPEP 804 (II)(B)(1) does not merely ask if the invention is only “an obvious variation of an invention claimed in the patent”, but alternatively, if the application defines an invention that is **anticipated by** the invention in a patent. It is this question that the examiner addressed, not the “variation” question, in the first action.

In response to the *Graham v. John Deere* inquiries, a detailed comparison of claims is as follows:

Application/Control Number:  
10/691,675  
Art Unit: 2621

***Patent 6,285,746 Claim 1***

- that said video and audio received
- at least one audio and video source is supplied and stored on said at least one mass storage device
- said supplied video and audio signals to the video display and audio playback unit from at least one mass storage device is capable of being supplied independently of the storage of a video and audio signal to said mass storage device

***Application 10/691,675 Claim 75***

- accepting a multimedia stream of an individual multimedia presentation
- routing the accepted multimedia stream to a storage device for recording
- extracting the recorded multimedia stream from the storage device for delivery to a multimedia playback device while a different multimedia stream is being routed to the storage device for recording.

Therefore, since it has been shown that every limitation of claim 75 of the present invention is anticipated by claim 1 of US Patent 6,285,746, the examiner respectfully maintains the obviousness-type double patenting rejection of claim 75.

8. Applicant traverses the rejection of claims 36-43, 45-47, and 49-75 under 35 U.S.C. 103(a) as obvious over US Patent 4,682,248 (Schwartz) in view of US Patent 4,972,396 (Rafner), and presents multiple arguments.



Application/Control Number:  
10/691,675  
Art Unit: 2621

8. First, applicant states that figures 8 and 8A of Schwartz do not depict "a communication processor coupled to at least one source of video and audio signals" or "coupled to a central processing unit" of claim 36 (pg. 7). In response to this, it is noted that the examiner instead relied on Rafner as teaching this "communications processor" (Office action, page 7), "Processing apparatus 202", corresponding with the communications processor of the current invention".

9. Applicant additionally states that Schwartz does not teach the claimed "mass storage device" of claim 36, and specifically argues that the RAM of Schwartz does not correspond with the claimed "mass storage device" (pp. 7-9). This appears to be based on a misreading of the prior Office action. Instead, the Disk Drive of Schwartz (fig. 8A) was relied on for teaching the claimed "mass storage device" (Office action, pg. 6), "encoded video and audio signals stored on the disk drive are sent to the buffers...and outputted on a display". Applicant is directed to column 14: lines 56-67 of Schwartz to show that the disk drive of Schwartz is configured so that "the entire memory space can then be accessible within 1/2 second or less to allow continuous motion playback that includes jump-cut splices anywhere in the recorded material" (column 14: lines 58-61), showing that the disk drive has "random access capabilities". Additionally, the disk drive of Schwartz is configured for "continuous motion playback" (line 60) and "recovery and manipulation" (line 65) of audio and video data, showing that the disk drive is configured "such that video and audio signals are stored on said mass storage device

Application/Control Number:  
10/691,675  
Art Unit: 2621

and further such that video and audio signals are stored on said mass storage device are supplied to a video display and audio playback unit" as recited in claim 36.

10. Applicant additionally states that Rafner does not teach a system "wherein said video and audio signals are capable of being supplied independently of the storage of another of said video and audio signals to said mass storage device" or "based upon controls from the communications processor" (pg. 9). Applicant is directed to column 2: lines 46-48, which specifies that in Rafner, disk heads "read and write data from and onto the disk **independently** of the other recording-reading heads in the system" (emphasis added). Applicant is respectfully requested to particularly point out how this allegedly fails to teach "video and audio signals are capable of being supplied independently of the storage of another of said video and audio signals to said mass storage device"; as recited in claim 36. Further, Rafner states that processing means 202 "sends and receives information" to "output processed or real time information to any or all of the output devices" (column 6: lines 13-19). This corresponds with the claimed "controls from the communications processor".

11. Applicant additionally states that regarding claims 38, 49, 54, 61, 62, and 64, that the "data acquisition module" of figure 1 of Schwartz does not correspond with the claimed "input interface", and that the "player module" of figure 1 of Schwartz does not correspond with the claimed "output interface", as stated in page 7 of the prior Office action, apparently asserting that those modules do not operate on a single stream "of an

Application/Control Number:  
10/691,675  
Art Unit: 2621

individual multimedia presentation". However, figure 1 clearly shows a single "input" coupled to the data acquisition module, and a single "output" coupled to the player module.

12. Applicant additionally states that the examiner failed to address the "communications processor" of claim 38. This appears to be based on a misreading of the prior Office action. Instead, the examiner relied on processing apparatus 202 of Rafner as controlling "the processes of receiving information from external input sources through a receiver and sending information to an output device" (pg. 7). Since this processing device, specifically recited as teaching the "communications processor" of claim 36, appears substantially similar to the communications processor of claim 38, Examiner, in the interest of brevity, found it unnecessary to repeat references to common elements of the various claims. It is also noted that figure 8A of Schwartz additionally shows a direct memory access device and a disk controller coupled to the CPU and the disk drive through a bus, routing multimedia data to and from the disk drive.

13. Applicant additionally states that the examiner failed to address the "processor circuitry" of claim 49. This appears to be based on a misreading of the prior Office action. Instead, the examiner relied on processing apparatus 202 of Rafner as controlling "the processes of receiving information from external input sources through a receiver and sending information to an output device" (pg. 7). Since this processing

Application/Control Number:  
10/691,675  
Art Unit: 2621

device, specifically recited as teaching the "communications processor" of claim 36, appears substantially similar to the "processor circuitry" of claim 49, Examiner, in the interest of brevity, found it unnecessary to repeat references to common elements of the various claims.

14. Applicant additionally states that the examiner failed to address the "central processing unit" and "communications bus" of claim 54. This appears to be based on a misreading of the prior Office action. Instead, the examiner relied on processing apparatus 202 of Rafner as controlling "the processes of receiving information from external input sources through a receiver and sending information to an output device" (pg. 7). Since this processing device, specifically recited as teaching the "communications processor" of claim 36, appears substantially similar to the central processing unit of claim 54, the examiner, in the interest of brevity, found it unnecessary to repeat references to common elements of the various claims. It is additionally noted that, as recited in page 6 of the prior office action, Schwartz includes a "central processing unit", and a "bus" between the CPU and the RAM buffers for input and output.

15. Applicant additionally states that the Disk Read/Write module of Schwartz, in combination with Rafner, fails to correspond with the claimed "co-processor" of claim 54. Schwartz, column 8: lines 52-55, states, "In the 'write' mode, records in the form of the data stream format...will be written to disk storage as long as there is space

Application/Control Number:  
10/691,675  
Art Unit: 2621

available". Applicant is respectfully requested to particularly point out how this allegedly fails to teach the claimed limitation of "routing an incoming media stream to a storage device for recording". Applicant is reminded that in showing anticipation, an *ipse dixit* test is not required. See *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). Instead, the question is if "any of the structures or compositions within the scope of the claim is known in the prior art". See *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ 2d 1375, 1376 (Fed Cir. 2001). Schwartz, column 8: lines 62-66 additionally states, "In the retrieve mode, or playback, the Disk Read/Write module first reads the Waveform Catalog from the disk into RAM. The waveform tables are then accessed by the Player module when called within each disk record". Applicant is respectfully requested to particularly point out how this allegedly fails to teach the claimed limitation of "causing a multimedia stream extracted from the storage device to be routed to the output interface". It is additionally noted that figure 8A of Schwartz shows a DMA module and disk controller module coupled to the disk drive, and coupled to the audio and video output connectors through the CPU and the RAM buffer. Regarding the claimed limitation of "extracting the multimedia stream from the storage device for routing to the output interface during routing of a different multimedia stream to the storage device for recording", it was well established that Rafner teaches this limitation. See, for example, Rafner, column 2: lines 61-64: "It is yet another object of the present invention to provide apparatus wherein continuous and real-time storage of new data would not be interrupted by the review of any stored data on the disk".

Application/Control Number:  
10/691,675  
Art Unit: 2621

16. Applicant additionally states that the Disk Read/Write module of Schwartz, in combination with Rafner, fails to correspond with the claimed subject matter of claim 55. Schwartz, column 8: lines 52-55, states, "In the 'write' mode, records in the form of the data stream format...will be written to disk storage as long as there is space available". Applicant is respectfully requested to particularly point out how this allegedly fails to teach the claimed limitation of "means in the data path for the multimedia stream for routing the multimedia to the storing means for recording". Applicant is reminded that in showing anticipation, an *ipsimms verbis* test is not required. See *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). Instead, the question is if "any of the structures or compositions within the scope of the claim is known in the prior art". See *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ 2d1375, 1376 (Fed Cir. 2001). Schwartz, column 8: lines 62-66 additionally states, "In the retrieve mode, or playback, the Disk Read/Write module first reads the Waveform Catalog from the disk into RAM. The waveform tables are then accessed by the Player module when called within each disk record". Applicant is respectfully requested to particularly point out how this allegedly fails to teach the claimed limitation of "extracting the multimedia stream from the storing means for playback". It is additionally noted that figure 8A of Schwartz shows a DMA module and disk controller module coupled to the disk drive, and coupled to the audio and video output connectors through the CPU and the RAM buffer. Regarding the claimed limitation of "extracting the multimedia stream from the storing means for playback during routing of a different multimedia stream to the storing means for recording", it was well established that Rafner teaches this limitation. See, for example,

Application/Control Number:  
10/691,675  
Art Unit: 2621

Rafner, column 2: lines 61-64: "It is yet another object of the present invention to provide apparatus wherein continuous and real-time storage of new data would not be interrupted by the review of any stored data on the disk".

17. Applicant makes similar arguments regarding claims 61, 62, and 69 as the above arguments regarding claims 54 and 55, arguing that the claimed Disk Read/Write module of Schwartz, given the ability to access multiple disk heads simultaneously, as suggested by Rafner, does not correspond with the claimed "logic circuit" of claim 61, the claimed "communications processor" of claim 62 (pp. 12-14), or the claimed "multimedia stream routing means" of claim 69 (pp. 15-16). Again, applicant is respectfully invited to demonstrate how the write mode of Schwartz is patentably distinct from the "routing of multimedia streams to the storage device", how the read mode of Schwartz is patentably distinct from the "causing a recording multimedia stream to be extracted from the storage device and routed to the output interface for playback", and how the simultaneous disk read and write of Rafner is patentably distinct from the "extracting the recorded multimedia stream for routing to the output interface for playback during routing of a different multimedia stream to the storage device for recording".

18. Applicant further states that the processing means 202 of Rafner does not correspond with the claimed "processor circuitry" of claim 64. (This showing of processing means 202 of Rafner is similar to the teaching cited in the rejections of

Application/Control Number:  
10/691,675  
Art Unit: 2621

claims 36, 38, 49, and 54, discussed above.) While it is true that processing apparatus 202 performs signal processing functions (column 6: lines 9-12), as stated by Applicant, Rafner also states that the multi-head drive is configured "to send and receive information **from processing means 202** and then output processed or real time information to any or all of the output devices" (column 6: lines 16-19). It is this language that is used to demonstrate that processing means 202 acts as the controller for multihead drive 200. Even supposing, hypothetically, that processor 202 of Rafner did not control input and output from disk drive 200, Official Notice would be taken that such a control is inherently necessary, since all disk drives are known to require control means to be operable.

19. Regarding claim 75, the steps of the method of claim 75 are capable of being performed by any of the apparatuses stated above. As an example, claim 54 will be compared, limitation by limitation, with claim 75.



31Application/Control Number:  
10/691,675  
Art Unit: 2621

***Claim 54***

- an input interface to accept a multimedia stream of an individual multimedia presentation
- the co-processor causing the incoming multiple media stream to be routed to the storage device for recording
- the co-processor further being capable of extracting the multimedia stream from the storage device for routing to the output interface during routing of a different multimedia stream to the storage device for recording

***Claim 75***

- accepting a multimedia stream of an individual multimedia presentation
- routing the accepted multimedia stream to a storage device for recording
- extracting the recorded multimedia stream from the storage device for delivery to a multimedia playback device while a different multimedia stream is being routed to the storage device for recording

Applicant is warned that stating that the device recited in claim 54 of the present invention is incapable of performing the method of claim 75 may be construed as admitting that claim 54 is inoperable, and therefore non-patentable under the utility requirement of 35 U.S.C. §101.

20. Applicant further states that since dependent claims 37, 39-43, 45-48, 50-53, 56-60, 63, 65-68, and 70-74 are dependent on the independent claims discussed above,

31Application/Control Number:  
10/691,675  
Art Unit: 2621

they are patentable over the prior art (pg. 16-17). However, as it has been shown above, the combination of Schwartz and Rafner recites every claimed limitation of each of the independent claims.

21. Applicant additionally states that Schwartz and Rafner do not teach the claimed limitation of "wherein the recorded multimedia stream is extracted from the storage device at a time removed from the recording of the recorded multimedia stream" of claim 39 (pp. 17-18). Attention is directed to column 4: lines 62-65 of Rafner: "In a home/consumer setting, a consumer might begin recording a program at 7:00 p.m. but begin viewing the program at 7:10 p.m." It is noted that in page 7 of the prior Office action, it was stated that "a viewer watching a recorded program on the system of Rafner could begin viewing the program a delayed time after recording starts", citing column 4: lines 62-66 of Rafner. This flatly contradicts the bold assertion that "the Examiner has not provided any evidence that Rafner teaches" this claimed limitation.

22. Applicant additionally states that Schwartz does not teach processing a multimedia presentation comprising both audio and video, as recited in claims 40 and 50 of the present invention. Applicant is directed to at least the title of Schwartz, "Audio and Video Digital Recording and Playback System", column 3: line 38 (store high quality digital video and audio data", column 3: line 49 (processing digital audio and video data), column 4: line 13 (audio and video recording is desired), column 5: lines 53-54 (converting analog signals such as audio signals, and/or video signals), &c.

31Application/Control Number:  
10/691,675  
Art Unit: 2621

23. Applicant also states that the "microcomputer recording system" of Schwartz cannot be the claimed RISC processor of claim 41. In response, "The Case for the Reduced Instruction Set Computer" (Patterson et al.) is introduced into the record to demonstrate that the RISC architecture was a known microcomputer design at the time of the invention. Applicant is respectfully requested to particularly point out in Schwartz where the microcomputer of Schwartz must be limited to a Complex Instruction Set Computer (CISC). Examiner respectfully maintains that the term "microcomputer", as used in Schwartz, inherently encompasses a RISC microcomputer.

24. Similarly, Applicant states that Schwartz cannot be a "general purpose microprocessor". Although it is stated that the IC component embodiment of figure 5 of Schwartz is not the preferred embodiment of Schwartz, it is noted that anticipation of a claimed element does not depend on whether the prior art reference disparages or teaches away from the claimed invention. See *Celeritas Technologies Ltd. v. Rockwell International Corp*, 150 F.3d 1354, 1361, 47 USPQ 2d 1516, 1522-23 (Fed. Cir. 1998). Additionally, applicant is respectfully requested to particularly point out in Schwartz where the microcomputer embodiment of Schwartz (column 5: line 61) cannot contain a "general-purpose microprocessor", but must be limited to specialized circuitry such as a DSP or an ASIC.

31Application/Control Number:  
10/691,675  
Art Unit: 2621

25. Applicant further asserts that the 384Kb H channel cited in Rafner as an input channel is not a "digital" input stream, as recited in claims 46, 53, and 68. This is incorrect, as an H channel is part of the Integrated Services **Digital** Networks (ISDN) protocol. See, for example, "Definition: H-channel". It is therefore respectfully submitted that Rafner teaches accepting an incoming stream in a digital form.

26. Applicant also states that the "VLSI" embodiment of Schwartz cannot be "logic circuitry implemented in an integrated circuit package", as recited in claim 47. However, Applicant admits that VLSI is an acronym for "Very Large Scale **Integrated Circuit**" (pg. 20), comprising "logical groupings of circuit". Therefore, applicant's assertion that VLSI both is and is not an integrated logic circuit is logically invalid.

27. Applicant also argues that figure 1 of Schwartz does not teach a multimedia stream routing and extracting means "disposed in the data path between an input interface and an output interface", as recited in claims 56 and 70. However, in figure 1 of Schwartz, the input data path comprises an input, the data acquisition module, the RAM buffer module, the Waveform Analyzer & Coder, the Disk Record Assembler Module, the Disk Read/Write Module, and the Disk. The output data path, in turn, comprises the Disk, the Disk Read/Write Module, the RAM Buffer module, the player module, and the output. Both the input and output data paths include the Disk Read/Write module, already asserted above to correspond with the claimed multimedia stream routing and extracting means.

31Application/Control Number:  
10/691,675  
Art Unit: 2621

28. Applicant further asserts that the disk storage of Schwartz is not a "random access disk storage medium", as recited in claims 60 and 74 of the present invention, although admitting that Schwartz teaches that "the entire memory space can be accessible within 1/2 second or less". However, *The Authoritative Dictionary of IEEE Standards Terms* defines random-access as follows:

(1)(B) (computers) Pertaining to a storage device in which the access time is effectively independent of the location of data.

Therefore, it is respectfully maintained that the disk of Schwartz is a "random access" storage disk.

29. Applicant further admits that although Rafner teaches "the additional capability to record and/or play two inputs simultaneously", it is asserted that this is not the same as extracting a multimedia stream while routing a different multimedia stream or a different portion of the same multimedia stream, as recited in claim 66 of the present invention. However, as stated in column 5: lines 9-13 of Rafner, "While the first head is receiving input information from the receiver of the television", corresponding with the claimed extraction, "the second head would be reading tracks previously recorded by the first head ten minutes before", corresponding with the claimed routing for recording. Therefore, it is respectfully maintained that a reading simultaneous to recording is encompassed in the cited "record[ing] and/or play[ing] two inputs simultaneously". Applicant is reminded that in showing anticipation, an *ipsimms verbis* test is not

31Application/Control Number:  
10/691,675  
Art Unit: 2621

required. See *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). Instead, the question is if "any of the structures or compositions within the scope of the claim is known in the prior art". See *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ 2d1375, 1376 (Fed Cir. 2001).

30. Therefore, it has been shown that Schwartz, in combination with Rafner, teaches every element of claims 36-43, 45-47, and 49-75 of the present invention.

31. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Applicant first states that "Examiner admits that Schwartz does not teach 'wherein said video and audio signals is supplied to said video display and audio playback unit at a time removed from said storage of said video and audio signal'. This is incorrect. "Schwartz indicates a time-shifted video and audio playback" (Office action, pg. 6). This is supported in column 12: lines 44-46 of Schwartz: "the recording and playback functions can be integrated or separate". Next, applicant admits that "the flexibility of [Rafner] to simultaneously read, write, and alter several high bandwidth streams of data simultaneously would be invaluable" (Arguments, pg. 23), but states that Rafner does

31Application/Control Number:  
10/691,675  
Art Unit: 2621

not make any suggestion to "have the video and audio signals be capable of being supplied independently of the storage of another of the video and audio signals to the mass storage device based upon controls from the communications processor". However, Rafner states that "it is a principal object...to provide a multiple independently positionable recording-reading head disk system wherein the recording-reading heads move and act **independently** and either read or write data which was read or written by other heads nearly simultaneously (column 2: lines 49-55). Applicant also states that Rafner does not teach having "the stored video and audio signals be supplied to the video display and audio playback unit at a time removed from the storage of the video and audio signal". However, as stated above, Rafner teaches time-shifted display. See column 4: lines 62-65; column 5: lines 6-13. Therefore, since it has been shown that Rafner discloses the alleged "missing elements" of independent reading and recording and time shifting, it is respectfully maintained that one having ordinary skill in the art would be motivated to provide the disk recording system of Schwartz with multiple heads, as taught by Rafner, in order to enable advanced recording and playback functions such as the "simultaneous" reading, writing, and editing functions described in column 2: lines 9-12 of Rafner.

32. Regarding the remaining claims, the missing claim limitation from Schwartz is the capability of "extracting the recorded stream from the storage device for routing to the output interface during routing of the incoming stream of the same individual multimedia presentation to the storage device for recording" (claim 38), or "extracting a recorded multimedia stream from the storage device for routing to the output interface during

31Application/Control Number:  
10/691,675  
Art Unit: 2621

routing of a different multimedia stream to the storage device for recording" (claims 49, 54, 55, 61, 66, 75). The rationale and motivation to combine, then, is identical to that of claims 36, 37, 63, and 65, stated above. Claims 39 and 45 depend from claim 38, so it is believed that there is no need to provide a separate motivation to combine for these dependent claims, since it has already been shown that there is sufficient motivation to combine independent claim 38.

33. Regarding claims 44 and 48, applicant is reminded that the rejection of claims 44 and 48 is not based on Schwartz alone, in view of Carr, but on Schwartz, Rafner, and Carr. While Schwartz may or may not be concerned with digital transmission of video, as mentioned above, as admitted by the applicant, "Rafner further teaches that the cheapest method of data transmission is over an industry standard, fixed bandwidth, packet switching network" such as ISDN H-channel (Arguments, pg. 20). Rafner further states that this example is part of a "compression/transmission system" (column 6: line 25), wherein "such compression circuitry is well known in the art" (column 6: lines 30-31). Since Rafner is specifically directed to transmitting compressed video over an ISDN network, as cited in Carr as the reason to use H.261 video, (Office action, pp. 10-11; Carr, pg. 120: columns 2-3), this provides the desired "rational connection between the cited passage that is the source of the Examiner's reasoning and the missing claim limitations". See *KSR v. Teleflex*, 82 USPQ2d 1385, 1396 (US 2007).

34. Therefore, since it has been shown that there is sufficient motivation to combine Schwartz with Rafner, and further Schwartz and Rafner with Carr, all prior art rejections are respectfully maintained.



31Application/Control Number:  
10/691,675  
Art Unit: 2621

### ***Drawings***

35. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Double Patenting***

36. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states, "whoever invents or discovers any new and useful process ... may obtain a patent therefor..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

37. Claims 36 and 37 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1 and 3 of prior U.S. Patent No. 6,285,746 B1. This is a double patenting rejection.

31Application/Control Number:  
10/691,675  
Art Unit: 2621

38. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

39. Claim 75 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,285,746 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because the video processing device of claim 1 of the prior patent is designed to perform the method of claim 75 of the present application. The video and audio memory buffers accept a multimedia stream, the communication bus routes the stream to the mass storage device for recording, and the mass storage device are extracted to a video display and audio playback unit while a different video and audio signal is routed to the mass storage device for recording.

31Application/Control Number:  
10/691,675  
Art Unit: 2621

***Claim Rejections - 35 USC § 103***

40. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

41. Claims 36-43, 45-47, and 49-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4,682,248 (Schwartz) in view of US Patent 4,972,396 (Rafner). Schwartz teaches a computerized digital video recorder. Regarding claim 36, figures 8 and 8A show an embodiment of the recorder of Schwartz. This recorder includes a central processing unit, a RAM buffer coupled to a video connector (that is, a video buffer), a RAM buffer coupled to an audio connector (that is, an audio buffer), and a disk drive. The connecting line shown between the CPU and the RAM buffers is then a bus. At playback time, encoded video and audio signals stored on the disk drive are sent to the buffers, converted from digital to analog format, and outputted on a display (column 17, lines 23-45). However, while Schwartz indicates a time-shifted video and audio playback, it does not disclose playback during storage of further video and audio signals.

Rafner discloses a video recording system featuring a multiple-head recording disc. Regarding claim 36, figure 8 shows an embodiment of the system of Rafner. Processing apparatus 202, corresponding with the communications processor of the current invention, controls the processes of receiving information from external input sources through a receiver and sending information to an output device. Since the disc

31Application/Control Number:  
10/691,675  
Art Unit: 2621

of Rafner has multiple recording heads, one head may be receiving data independently of another head outputting data (column 6, lines 13-22). Regarding claim 37, a viewer watching a recorded program on the system of Rafner could begin viewing the program a delayed time after recording starts (column 4, lines 62-66).

Schwartz discloses the claimed invention except for independently storing a set of audio/video signals and playing back a different set of audio/video signals. Rafner teaches that it was known to provide a recording disc with multiple heads to facilitate independent record and playback options. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the multiple-head disc of Rafner as the disc drive of Schwartz, since Rafner states in column 2, lines 9-12 that such a modification would enable reading, writing, and editing multiple streams of data simultaneously.

Regarding claim 38, figure 1 of Schwartz shows Data Acquisition Module (DAM), which accepts an input signal (column 6, lines 28-65), corresponding to the input interface of the present invention, and Player Module, which produces an output signal (column 9, lines 1-3), corresponding to the output interface of the present invention. Regarding claim 39, again, a viewer watching a recorded program on the system of Rafner could begin viewing the program a delayed time after recording starts. Regarding claim 40, Schwartz operates on many types of signals, including audio and video (abstract). Regarding claim 41, Schwartz operates on a "microcomputer" (column 5, line 61), for which many RISC architectures were known at the time of the invention, such as SPARC or MIPS. Regarding claim 42, Schwartz may be assembled from "off-

31Application/Control Number:  
10/691,675  
Art Unit: 2621

the-shelf" standard IC components (column 9, lines 30-32). Regarding claim 43, again, Schwartz stores video and audio signals on a disk drive. Regarding claim 45, Schwartz may output to a television (column 17, line 39). Regarding claim 46, Rafner discloses the use of a multi-head recording disc as a buffer for digital video transmission over an ISDN H-channel (column 6, lines 50-68). Regarding claim 47, the system of Schwartz may be built with VLSI technology in several IC chips (column 9, lines 27-30).

Regarding claim 49, figure 1 of Schwartz shows a 2.6 MB/s input bus from the DAM to a RAM buffer module, and a 1.3 MB/s output bus from the RAM buffer module to a player module. Regarding claim 50, again, Schwartz operates on many types of signals, including audio and video. Regarding claim 51, again, Schwartz may be assembled from "off-the-shelf" standard IC components. Regarding claim 52, again, Schwartz stores video and audio signals on a disk drive. Regarding claim 53, again, Rafner discloses the use of a multi-head recording disc as a buffer for digital video transmission over an ISDN H-channel.

Regarding claims 54, 55, 61, 62, and 69, in Schwartz, Disk Read/Write module records data into the disk storage and reads from the disk at playback (column 8, lines 51-68). This corresponds with the "co-processor" of claim 54, the "multimedia stream routing means" of claim 55 and claim 69, the "logic circuit" of claim 61, and the "communications processor" of claim 62. Regarding claim 56 and claim 70, figure 1 of Schwartz shows input signals going to the disc storage through the read/write module via the DAM, the RAM buffer module, the WAC, and the DRA, and output signals going to the player module through the read/write module through the RAM buffer module.

31Application/Control Number:  
10/691,675  
Art Unit: 2621

Regarding claim 57 and claim 71, like other components of Schwartz, this may be implemented with standard IC components or as a custom VLSI chip (column 9, lines 27-32). Regarding claim 58 and claim 72, figure 5 of Schwartz shows a disk controller and a disk drive coupled to a microcomputer, which were well known at the time of the invention to include a CPU and a memory. Regarding claim 59 and claim 73, figure 1 of Schwartz shows "DISK STORAGE" device. Regarding claim 60 and claim 74, the disc storage device has a worst-case access time of 0.5 seconds for any point in the disc, and so is considered random-access for the purpose of jumping between cuts on a recorded program (column 14, lines 56-64). Regarding claim 63, again, in Rafner, a recorded program may be played back at a delay from recording.

Regarding claim 64, in Rafner, processing apparatus 202 controls the sending and receiving information to and from disc 200 and various input and output devices (column 6, lines 9-19). This corresponds with the processor circuitry of claim 64. Regarding claim 65, again, Rafner teaches playing back a recorded program at a delay after recording the program. Regarding claim 66, Rafner may record or read different programs simultaneously (column 5, lines 2-4). Regarding claim 67, the invention of Rafner is an optical disk system (abstract). Regarding claim 68, again, Rafner discloses receiving video over an ISDN H-channel.

Regarding claim 75, the apparatus of Schwartz is capable of performing the steps of accepting a multimedia stream, routing the multimedia stream to a storage device, and extracting the recorded multimedia stream from the storage device, and the apparatus of Rafner is capable of performing the step of extracting a recorded

31Application/Control Number:  
10/691,675  
Art Unit: 2621

multimedia stream from a storage device while a different multimedia stream is being routed to the storage device.

42. Claims 44 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz in view of Rafner as applied to claim 38 above, and further in view of "New Video Coding Standard for the 1990s" (Carr). Schwartz discloses various methods of video compression, such as the Fast Fourier Transform and the Fast Delta Hadamard Transform. However, Schwartz does not disclose a DCT transform or motion estimation. Carr describes the H.261 video-coding standard, developed in 1990 for teleconferencing. Regarding claim 44, H.261 was known to incorporate a DCT transform (pg. 121, column 1), and regarding claim 48, H.261 was known to incorporate motion compensation (pg. 121, column 3).

Schwartz, in combination with Rafner, discloses the claimed invention except for details of video encoding. Carr teaches that it was known to incorporate H.261 video coding and decoding in a video recording system. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to encode video as H.261 as taught by Carr, since Carr states in page 120, column 3, that such a modification would enable video to be transmitted over a 64 kb/s transmission line.

### ***Conclusion***

43. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

31Application/Control Number:  
10/691,675  
Art Unit: 2621

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David N. Werner whose telephone number is (571) 272-9662. The examiner can normally be reached on Monday-Friday from 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

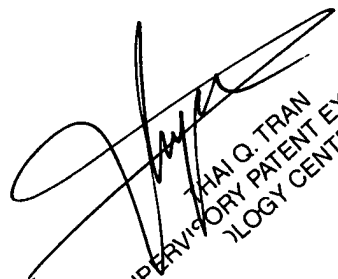
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31Application/Control Number:  
10/691,675  
Art Unit: 2621

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